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What is claimed is:

325 [Claim 1] A packer, comprising a sensor positioned therein.

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1 [Claim 2] The packer of claim 1, wherein the sensor is a MEMS
2 sensor.

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1 [Claim 3] The packer of claim 1, wherein the sensor is a
2 nanotechnology-based sensor.

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1 [Claim 4] The packer of claim 1, wherein the sensor comprises a
2 pressure gauge.

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1 [Claim 5] The packer of claim 1, wherein the sensor is adapted
2 to measure a characteristic within the packer.

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1 [Claim 6] The packer of claim 5, wherein the characteristic is a
2 pressure.

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1 [Claim 7] The packer of claim 1, further comprising:
2 a setting chamber; and
3 the sensor is adapted to measure a pressure within a setting
4 chamber.

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1 [Claim 8] The packer of claim 7, further comprising a second
2 sensor adapted to measure a characteristic external to the packer.

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1 [Claim 9] The packer of claim 1, wherein the sensor is adapted
2 to measure a characteristic external to the packer.

1 [Claim 10] The packer of claim 9, wherein the sensor is adapted
2 to measure a well annulus pressure.

1 [Claim 11] The packer of claim 1, wherein the sensor is adapted
2 to measure a tubing pressure.

1 [Claim 12] A completion, comprising:
2 a packer having a setting chamber;
3 a pressure gauge adapted to measure a pressure within the setting
4 chamber.

1 [Claim 13] The completion of claim 12, wherein the pressure
2 gauge measures the direct pressure of the setting chamber.

1 [Claim 14] The completion of claim 12, wherein the pressure
2 gauge is directly ported to the setting chamber.

1 [Claim 15] The completion of claim 12, wherein the pressure
2 gauge is positioned within the setting chamber.

1 [Claim 16] The completion of claim 12, wherein the pressure
2 gauge is positioned above the packer in a well.

1 [Claim 17] The completion of claim 12, wherein the pressure
2 gauge is adapted to measure a tubing pressure in an interior central
3 passageway of the packer via the setting chamber.

1 [Claim 18] A completion, comprising:

2 a packer;
3 a gauge above the packer;
4 the gauge communicating with an interior cavity of the packer.

1 [Claim 19] The completion of claim 18, wherein the gauge is
2 directly connected to the packer.

1 [Claim 20] The completion of claim 18, wherein the gauge is
2 positioned within the interior cavity of the packer.

1 [Claim 21] A method for use in a well, comprising directly
2 measuring a pressure in a setting chamber of a downhole tool with
3 a pressure gauge.

1 [Claim 22] The method of claim 21, further comprising measuring
2 a tubing pressure with the pressure gauge.

1 [Claim 23] A method for use in a well, comprising:
2 positioning a plurality of gauges within a packer;
3 measuring well characteristics at different positions within the well
4 using the gauges.

1 [Claim 24] The method of claim 23, further comprising measuring
2 a tubing pressure with one of the gauges.

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1 [Claim 25] The method of claim 23, further comprising measuring
2 an annulus pressure with one of the gauges.

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[Claim 26] The method of claim 23, further comprising measuring a setting chamber pressure within the packer with one of the gauges.